REMARKS

Claim 1-3, 5-12, and 14-18 are pending in the instant application. No claims have been added. Claims 888888 have been cancelled. Therefore, upon entry of the present Amendment, claims 1-3, 5-12, and 14-18 will be pending.

Claim Objections

Claims 1, 2, 6, 10, and 15 are objected to due to informalities. Applicants have corrected the informalities.

Claim Rejections - 35 USC § 112

Claims 6, 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claims 6 and 15 to correct antecedent basis.

Claim Rejections - 35 USC § 103

Claims 1-2, 5, 7-11, 14, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohindra (United States 7,035,341) in view of Mohindra (United States 6,744,829). Applicants traverse this rejection.

The Examiner has opined regarding claim 1 that Mohindra (341) discloses: a calibration tone generator in the form of a DSP implementation. The Examiner also cites column 9, lines 10-12, 34-36 of Mohindra (341) as teaching "adjustable all-pass networks". The passages read as follows:

> This is largely due to mismatches between the cutoff frequencies of the I and Q low-pass filters. The frequency dependent IQ phase error is corrected by cascading adjustable all-pass networks 72 and 74 in

> the I and Q base band signal paths. These all pass networks will be under the control of the DSP 40.
> …
>
> The DSP 40 adjusts R1 and/or C1 in the receiver all-pass networks and minimizes the value of |I.sub.sin(t).Q.sub.cos(t)-I.sub.cos(t).Q.sub.sin(t)| that is computed from the captured data.

Mohindra (341) further reads starting at line 50:

> The advantage of using all-pass networks is that they do not introduce any frequency dependent IQ gain imbalances that other networks like low-pass filters etc suffer from. Therefore any phase error produced in the RF path may be compensated for by the frequency adjustments of the all-pass networks 72 and 74, by the DSP 40.

In order to sustain a rejection under 35 U.S.C. §103(a) there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. " This entails consideration of both the "scope and content of the prior art" and "level of ordinary skill in the pertinent art" aspects of the Graham test including secondary considerations such as teaching away. *IN RE LEONARD R. KAHN*, 441 F.3d 977 (Fed. Cir. 2006). Inferences and creative steps that a person of ordinary skill in the art would employ can be used. The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *KSR INT'L CO. v. TELEFLEX INC*. 127 S. Ct. 1727 (2007).

Examiner was correct is previous Office Action to provide that claim 4 recited allowable subject matter. Original claim 4 is below:

> The receiver of claim 1, wherein: the I and Q filters include an I analog filter for providing said I output tone and a Q analog filter for providing said Q output tone; and said adjustable characteristic is a

cutoff frequency of at least one of said I and Q analog filters.

In the instant Amendment, Applicant has further limited the filters to low pass filters and removed claims for use of "allpass" filters. The use of lowpass filters rather than allpass filters to adjust the baseband frequency dependent phase imbalance is not obvious. In particular, it is not obvious that adjusting the cutoff frequency has the effect of a linear phase correction as in Mohindra (341) FIG 6, but without the use of an allpass. The adjustment of the cutoff frequency of the lowpass filter is not anticipated by Mohindra (341) as evidenced by the inclusion of an adjustable allpass filter *in addition* to the lowpass filter. The use of cross-correlation of I and Q signals to generate an adjustment signal is shown explicitly in Mohindra (829) but it is applied as a correction signal to an RF LO generator, not a baseband filter. In Mohindra (341), two separate RF signals are generated at different points in the calibration process to produce a correction signal, requiring a DSP to store the signals and compute the correction value. In instant application, the Applicant injects an I and Q signal at baseband and adjust the cutoff frequency of one lowpass filter until the cross-correlation is zero. The calibration of the instant application can be implemented without a DSP. Finally, Mohindra (341) teaches away from the use of a low-pass network.

Claims 2, 3, and 5, 9 are dependent, directly or indirectly upon claim 1.

Claim 10 has been also been amended to specifically recite use of low pass filters. Claims 11-12, and 14, 15, 18 are dependent, directly or indirectly upon claim 10.

In light of the above, it is respectfully submitted that the present application is in condition for allowance, and notice to that effect is respectfully requested.

While it is believed that the instant response places the application in condition for allowance, should the Examiner have any further comments or

suggestions, it is respectfully requested that the Examiner contact the undersigned in order to expeditiously resolve any outstanding issues.

Respectfully submitted:

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